

13 wherein

14 the valve spindle (10,10a) is a one-piece stem actuated directly by the motor for its

15 linear movement in an initial axial direction, extending from the motor and pushing the

16 safety valve (14,15) to open it initially, and in a second axial direction (e), retracting for the

17 raising of at least said modulating cut-off member (11);

18 safety cut-off means (21-24) to prevent the flow of gas towards any of the outlet

19 conduits (7,8,20) in case the movement of the spindle (10) is locked because of the motor,

20 wherein said cut-off means are housed in the central flow conduit (5) and are operated by

21 the spindle (10), in a position between the inlet conduit (6) and the outlet conduits (7, 8,

22 20), whereby in ~~it's~~ a forward movement (e) of the spindle (10) ~~the safety cut-off means~~

23 ~~(21-24)~~ , a free end (10a) of the spindle (10) is separated from the safety magnetic

24 assembly (14) and, as the flame safety valve is open, the flow of gas to any of the outlet

25 conduits (7, 8, 20), is kept shut off by the safety cut-off means (21-24), while the flame

26 safety valve (14, 15) remains open.

1 2.- (Previously presented) A motor-operated valve for regulating a gas flow according

2 to claim 1, wherein the safety cut-off means (21-24) comprise a cut-off member (21),

3 resting on a valve seat (22) interposed in the central flow conduit (5) downstream of the

4 gas flow modulating cut-off member (11), whereby when the spindle (10) is separated from

5 the magnetic assembly (14), as the flame safety valve (14,15) is open, the safety cut-off

6 member (21) is drawn by the valve spindle irrespective of a position of the flow modulating

7 cut-off member (21).

1           3.- (Previously presented) A motor-operated valve for regulating a gas flow according  
2 to claim 1, wherein the safety cut-off means (21-24) comprise a cut-off member (21),  
3 resting on a valve seat (22), interposed in the central flow conduit (5) by means of the  
4 pressure of a return spring which has a compression coefficient lower than that of the  
5 return spring (17) of the cut-off member (11) for regulating the gas flow (3), whereby the  
6 safety cut-off member (21') is raised by the forward movement (e) of the spindle (10), while  
7 the regulating cut-off member (11) remains in position against the valve seat (22).

1           4.- (Previously presented) A motor-operated valve for regulating a gas flow adapted  
2 for the supply of a main gas flow and a pilot gas flow to an environmental heating  
3 appliance, comprising:

4           a valve body (4) with a gas inlet conduit (6), a central flow conduit (5), extended  
5 axially in the valve body, and a number of gas outlet conduits (7,8) transverse to said  
6 central flow conduit;

7           a valve spindle (10,10a) that slides linearly along the central flow conduit (5) and at  
8 least one cut-off member (11) coupled to the valve spindle (10) to modulate a gas flow (3)  
9 directed to a main outlet conduit (8);

10           a motor (9) coupled on the valve body for actuating the valve spindle and axial  
11 movement of the valve spindle in both directions;

12           a flame safety valve (14,15) provided with a magnetic assembly (14) located on one  
13 side of the valve body opposite the motor (9) side and in series with the inlet conduit (6);

14           wherein the valve spindle (10,10a) is a one-piece stem actuated directly by the motor  
15 for its linear movement in an initial axial direction, extending from the motor and pushing

16 the safety valve (14,15) to open the safety valve (14, 15) initially, and in a second axial  
17 direction (e), retracting for the raising of at least said modulating cut-off member (11);

18 said central flow conduit, comprising two intermediate portions (5a,5b) of conduit  
19 arranged in series, each intermediate portion (5a,5b) having a different diameter, between  
20 the flame safety valve (14,15) and the modulating cut-off member (11), wherein the  
21 smaller-diameter intermediate conduit portion (5a), is downstream of both gas flow outlet  
22 conduits (7,8);

23 safety cut-off means (5a, 21-24, 21'-22') to prevent the flow of gas towards the outlet  
24 conduits (7,8,20) in case the movement of the spindle (10) is locked because of the motor,  
25 wherein said cut-off means are housed in the smaller-diameter intermediate conduit portion  
26 (5a) and are drawn by the spindle (10), whereby, as the flame safety valve is open, the flow  
27 of gas to any of the outlet conduits (7,8,20) is kept shut off.

1 5.- (Previously presented) A motor-operated valve for regulating a gas flow according  
2 to claim 4, wherein said safety cut-off members (5a, 21-24, 21'-22') comprise a flat disc  
3 (21') attached to the valve shaft and encircled by a sealing O-ring (22'), the flat disc sliding  
4 in said smaller-diameter conduit portion (5a), located adjacent to and downstream of the  
5 flame safety valve (14,15).